CLAIMS

1. A method for exchanging data between two layers of a network stack in a data transmission system comprising a header compression and/or decompression mechanism, characterized in that it comprises at least the following steps:

- transmitting the initial packets to a packet header compression/decompression step, and simultaneously
- transmitting additional information to a shaping step so as to produce said information in additional packets compatible with the network stack.

2. The method as claimed in claim 1, characterized in that the transmission of the information flowing from the network access level to the application package level, comprises at least the following steps:

- differentiating the information originating from the transmission channel or from the channel decoder into a stream of initial packets and a stream of previously quantized additional information,
- transmitting the coded initial packets and the additional information to a header decompression step,
- shaping the quantized additional information as a function of the characteristics of the protocol stack,
- transmitting the two streams thus obtained to a source coding step.

3. The method as claimed in claim 1, characterized in that the transmission of the information flowing from the network access level to the application package level, comprises at least the following steps:

- differentiating the information originating from the transmission channel or from the channel

decoder into a stream of initial packets and a stream of previously quantized additional information,

- transmitting the coded initial packets and the additional information to a header decompression step,
- shaping the quantized additional information as a function of the characteristics of the protocol stack,
- transmitting the two streams thus obtained to a source decoding step.

4. The method as claimed in claim 1, characterized in that the transmission of information flowing from the application package level to the network access level, it comprises at least the following steps:

- differentiating the packets originating from the protocol stack into a stream of initial packets and a stream of additional information packets,
- compressing the headers of the initial packets and transmitting them to a channel coding step,
- shaping the additional information by extracting some additional information for transmission to the channel coding step,
- transmitting the stream generated by the channel coding for sending to the transmission channel.

5. The method as claimed in claim 1, characterized in that the transmission of information flowing from the application package level to the network access level, it comprises at least the following steps:

- differentiating the packets originating from the protocol stack into a stream of initial packets and a stream of additional information packets,
- compressing the headers of the initial packets and transmitting them to a channel coding step of the access layer,

- shaping the additional information by extracting some additional information for transmission to the channel decoding step,
- transmitting the stream generated by the channel coding for sending over the transmission channel.

6. The method as claimed in claim 1, characterized in that the transmission of information flowing from the application package level to the network access level, it comprises at least the following steps:

- differentiating the packets originating from the protocol stack into a stream of initial packets and a stream of additional information packets,
- compressing the headers of the initial packets and transmitting them to a channel coding step,
- shaping the packets transporting the additional information quantized by header compression as a function of the characteristics of the protocol stack for transmission to the channel coding step,
- transmitting the streams generated by the channel coding for sending over the transmission channel.

7. The method as claimed in one of claims 1 to 3, characterized in that the decompression step consists in differentiating the packets originating from the transmission channel, reconstructing the original packets of data, transmitting the additional information generated to the channel coder or to the channel decoder.

8. The method as claimed in one of claims 1 to 3 or 7, characterized in that the decompression step consists in differentiating the packets originating from the transmission channel, reconstructing the original packets of data, generating additional packets containing the additional information and transmitting them to the application package level.